

REMARKS

The Office action mailed on 8 April 2004 (Paper No. 5) has been carefully considered.

The specification is being amended to correct minor errors and improve form. Claims 4 and 14 are being canceled without prejudice or disclaimer, claims 1, 2, 3, 5, 7 thru 13 and 15 are being amended, and new claim 16 is being added. Thus, claims 1 thru 3, 5 thru 13, 15 and 16 are pending in the application.

In paragraph 1 of the Office action, the Examiner objected to claim 6 for an informality. Specifically, the Examiner stated that the recitation of “at least one function-extending module” may not be able to comprise the subject matter “a plurality of function-extending modules”. As a reason, the Examiner stated that the subject matter “at least one function-extending module” could be one function-extending module, and thus the Examiner apparently concluded that the potential interpretation of the limitation “one function-extending module comprises a plurality of function-extending modules” did not make sense (*see* page 2, paragraph 1, lines 2-7 of the Office action).

Applicant respectfully disagrees with the Examiner’s objection to claim 6, and with the rationale supporting that objection. The recitation “at least one function-extending module is interpreted, under U.S. patent practice, as including either “one

function-extending module" or "more than function-extending module". Then, when a claim contains the recitation "said at least one function-extending module comprising a plurality of function-extending modules", that recitation limits the claim in question by narrowing the scope of the claim so as to exclude a single module and to recite "more than function-extending module". For this reason, it is respectfully submitted that the objection to claim 6 is inappropriate, and should be withdrawn.

In paragraph 3 of the Office action, the Examiner rejected claims 2 thru 5, 7 thru 11 and 14 under 35 U.S.C. §112 (second paragraph) for indefiniteness. With respect to the rejection of claim 2, it will be noted that the major portion of the recitation of original dependent claim 2 has been incorporated into independent claim 1 by amendment. It will also be noted that, in incorporating the recitations from dependent claim 2 into independent claim 1, the comments set forth by the Examiner in paragraph 3 of the Office action have been taken into account.

Thus, the portion added to independent claim 1 by amendment now recites that the base module has a port and each function-extending module has first and second ports. Amended claim 1 further recites that the first switching part selectively connects the port of the base module to the first port of one function-extending module, while the second switching part selectively connects the second port of "said one function-extending module" to the first port of any other function-extending module. It is believed that the

amendatory language now added to independent claim 1, as derived from dependent claim 2, meets the requirements of 35 U.S.C. §112 (second paragraph).

With respect to the rejection of claim 7, that claim is being amended in a manner consistent with the Examiner's comments. That is, claim 7, line 2 is being amended to recite "a module rack" instead of "the module rack". Accordingly, the rejection of claim 7 under 35 U.S.C. §112 (second paragraph) should be withdrawn.

With respect to the rejection of claims 9 and 14, dependent claim 9 is being amended to delete the word "detachably" before the word "connecting", while dependent claim 14 is being canceled and its recitation incorporated into independent claim 12, but the word "detachably" appearing before "connecting" is being eliminated in amending independent claim 12.

However, despite the fact that the word "detachably" is being eliminated from the claims, it is submitted that the terminology "detachably connecting" has a clear meaning. Specifically, the word "detachably" is an adverb as pointed out by the Examiner, but it is derived more directly from the adjective "detachable". Since the word "detachable" is defined as "capable of being detached", when the terminology "detachably connecting" is utilized, it is intended to mean that an element is connected to another in such a manner that it is capable of being detached or removed subsequently. Nevertheless, in view of

the elimination of the word “detachably” from the claims, there should no longer be a rejection under 35 U.S.C. §112 (second paragraph).

In paragraph 6 of the Office action, the Examiner rejected claims 1, 6 thru 8, 10 and 11 under 35 U.S.C. §103 for alleged unpatentability over Matsumoto *et al.*, U.S. Patent No. 5,621,659 in view of Drucker, U.S. Patent No. 5,591,984. In paragraph 7 of the Office action, the Examiner rejected claims 2 and 3 are rejected under 35 U.S.C. §103 for alleged unpatentability over Matsumoto *et al.* ‘659 in view of Drucker ‘984, and further in view of Martinelli *et al.*, U.S. Patent No. 6,098,138. In paragraph 8 of the Office action, the Examiner rejected claims 12, 13 and 15 under 35 U.S.C. §103 for alleged unpatentability over Matsumoto *et al.* ‘659 in view of Drucker ‘984, and further in view of Lach, U.S. Patent No. 6,363,452. In paragraph 9 of the Office action, the Examiner objected to claims 4 and 5 for dependency upon a rejected base claim, but stated that these claims would be allowable if rewritten to overcome the rejection under the second paragraph of 35 U.S.C. §112, and to include all of the limitations of the base claim and any intervening claims.

For the reasons stated below, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §103.

Independent claim 1 is being amended to include recitations derived from dependent claims 2 and 4. The recitations from intervening dependent claim 3 have been omitted as not essential to patentability of independent claim 1.

Thus, independent claim 1 now recites that the base module has a port and that each function-extending module has first and second ports. The terminology “IEEE 1394” port has been omitted as also not essential to patentability of the claim in view of the Examiner’s indication to that effect in citing Martinelli *et al.* ‘138 (see, for example, page 8, lines 3-6 of the Office action).

Independent claim 1 is being amended also to recite that the switching unit comprises a first switching part for selectively connecting the port of the base module to the first port of one function-extending module, and a second switching port for selectively connecting the second port of said one function-extending module to the first port of any other function-extending module. The recitation is derived from intervening dependent claim 2.

Amended independent claim 1 also further recites that the second switching part comprises $n-1$ switching devices, each switching device corresponding to a given function-extending module, each switching device comprising a common port and $n-1$ selection ports, one selection port for each of $n-1$ other switching devices. The latter

recitation is derived from dependent claim 4, which was merely objected to by the Examiner for dependency upon a rejected base claim.

Finally, independent claim 1 further recites that the common port of said each switching device is connected to the second port of said given function-extending module, and said n-1 selection ports of said each switching device are connected to the first port of said n-1 other switching devices, respectively. This latter recitation is also derived from dependent claim 4, which was indicated by the Examiner to recite allowable subject matter.

Therefore, in view of the amendment of independent claim 1 to include both recitations from dependent claims 2 and 4 (as deemed by the Examiner to be essential to patentability), independent claim 1 and the associated dependent claims should now be in condition for allowance. In addition, it should be noted that the amendment of independent claim 1 to recite patentable subject matter is consistent with the Examiner's statements of reasons for indication of allowable subject matter in dependent claim 4, as contained in paragraph 10 of the Office action.

With respect to independent claim 7, as mentioned above, the rejection of that claim under 35 U.S.C. §112 (second paragraph) should no longer apply in view of the amendment of the term "module rack" to read "a module rack" in line 2 of the claim.

With respect to the rejection of independent claim 7 under 35 U.S.C. §103, independent claim 7 is being amended to add three additional steps (steps (a) thru (c)), while relabeling previous steps (a) and (b) as steps (d) and (e), respectively. Thus, independent claim 7 recites, in its first three steps, limitations corresponding to those limitations added by amendment to independent claim 1. Therefore, for the reasons set forth above relative to independent claim 1, independent claim 7 and its associated dependent claims distinguish the invention from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §103. That is to say, the prior art does not disclose or suggest a method for connecting a plurality of function-extending modules to a base module, including the initial step of providing a switching unit having a first port connected to the base module, a plurality of common ports, one for each function-extending module, and a plurality of additional ports, and the prior art does not disclose or suggest such a method including the steps of connecting each common port of the switching unit to a first port of a respective one of the function-extending modules, and connecting each additional port of the switching unit to a second port of a corresponding one of the function-extending modules, as now recited in independent claim 7.

With respect to independent claim 12, as mentioned above, that claim is being amended to include the recitations from dependent claim 14, which is being canceled. In the process, the recitations of dependent claim 14 are being amended to delete the word “detachably”, thereby eliminating the rejection under 35 U.S.C. §112 (second paragraph).

Moreover, since dependent claim 14 was not rejected based on prior art, independent claim 12 and its associated dependent claims should now be distinguishable from the prior art so as to preclude rejection under 35 U.S.C. §102 or §103.

New independent claim 16 is being added to provide complete protection of the invention. In that regard, independent claim 16 is a combination of the recitations of independent claim 7 and associated dependent claim 9. As mentioned above, the language of independent claim 7 and dependent claim 9 have been amended to eliminate the rejection under 35 U.S.C. §112 (second paragraph), and those changes have been incorporated into the drafting of new independent claim 16. Since dependent claim 9 was not rejected based on prior art, it is submitted that independent claim 16 recites the method of the present invention in a manner distinguishable from the prior art so as to preclude rejection under 35 U.S.C. §102 or §103.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

A fee of \$86.00 is incurred by the addition of one (1) independent claims in excess of 3. Applicant's check drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



Robert E. Bushnell,
Attorney for the Applicant
Registration No.: 27,774

1522 "K" Street N.W., Suite 300
Washington, D.C. 20005
(202) 408-9040

Folio: P56585
Date: 6/28/04
I.D.: REB/JGS